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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,603	11/30/2001	John M. Belcea	MESH029	4108

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MOTOROLA, INC  
INTELLECTUAL PROPERTY SECTION  
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EXAMINER

NGO, NGUYEN HOANG

ART UNIT PAPER NUMBER

2616

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/996,603	<b>Applicant(s)</b> BELCEA, JOHN M.	
	<b>Examiner</b> Nguyen Ngo	<b>Art Unit</b> 2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 18 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) ✓  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

This communication is in response to the amendment of 5/31/06. All changes made to the Claims have been entered. Accordingly, Claims 1-18 are currently pending in the application.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-8, and 10-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah et al. (US 2002/0131370), hereinafter referred to as Chuah.

**Regarding claim 1, 3, 6, 7, and 8**, Chuah discloses a method that relates to estimation and correction of clock offset in distributed resources interconnected by a network (method for determining a relationship between the timing of a local clock of a node with

respect to the timing of a local clock of at least one other node in a wireless communications network page 1 [0001]). Chuah further discloses;

transmitting a clock information request message (timing messages) from said node to said other node at a request transmission time ( $T_{i0}$  in figure 1);

receiving at said node a response message from said other node at a response reception time ( $T_{i3}$  in figure 1), said response message including timing information pertaining to a request reception time ( $T_{i1}$ ) and response transmission time ( $T_{i2}$ ) at which said other node transmitted said response message (page 1 [0014]);

calculating a difference between the timing of said local clock of said node and said local clock of said other node based on said timing information, said request transmission time and said response reception time (offset between sender node and receiver node, page1 [0014]).

Chuah however fails to specifically disclose that the communication network be wireless. However it is well known in the art of the use of Network Time Protocol (NTP) as disclosed by Chuah for Ad Hoc Mobile Environments and thus it would have been obvious to implement the method for clock offset estimations for resources distributed across a network in a wireless communication network in order to accurately collect time information for a system.

**Regarding claim 2**, Chuah discloses calculating a propagation time for a signal to propagate between said node and said other node based on said timing information,

said request transmission time, and said response reception time (clock offset between sender and receiver nodes, page1 [0014]).

**Regarding claim 4, 5,** Chuah discloses said method performs said transmitting, receiving and calculating steps to calculate a respective said difference between the timing of said local clock of said node and a respective said local clock of each of a plurality of said other nodes (figure 3 and page 3 [0041]).

**Regarding claim 10, 12, 15,16, and 17,** Chuah discloses a system that relates to estimation and correction of clock offset in distributed resources interconnected by a network (system for determining a relationship between the timing of a local clock of a node with respect to the timing of a local clock of at least one other node in a wireless communications network page 1 [0001]). Chuah further discloses;

transmitting a clock information request message (timing messages) from said node to said other node at a request transmission time ( $T_{i0}$  in figure 1);

receiving at said node a response message from said other node at a response reception time ( $T_{i3}$  in figure 1), said response message including timing information pertaining to a request reception time ( $T_{i1}$ ) and response transmission time ( $T_{i2}$ ) at which said other node transmitted said response message (page 1 [0014]);

calculating a difference between the timing of said local clock of said node and said local clock of said other node based on said timing information, said request

Art Unit: 2663

transmission time and said response reception time (offset between sender node and receiver node, page1 [0014]).

Chuah however fails to specifically disclose that the communication network be wireless and that the system comprises a transmitter, a receiver, and a processor. However it is well known in the art of the use of Network Time Protocol (NTP) as disclosed by Chuah for Ad Hoc Mobile Environments and thus it would have been obvious to implement the method for clock offset estimations for resources distributed across a network in a wireless communication network in order to accurately collect time information for a system. It is further well known in the art that nodes of a system comprises a transmitter for transmitting messages (as seen in figure 1), a receiver for receiving messages, and processors that calculate the clock offset (page 3 [0039]), and thus it would have been obvious to have network nodes consist of a transmitter, a receiver, and a processor.

**Regarding claim 11**, Chuah discloses calculating a propagation time for a signal to propagate between said node and said other node based on said timing information, said request transmission time, and said response reception time (clock offset between sender and receiver nodes, page1 [0014]).

**Regarding claim 13, 14**, Chuah discloses transmitting, receiving and calculating steps to calculate a respective said difference between the timing of said local clock of said

Art Unit: 2663

node and a respective said local clock of each of a plurality of said other nodes (figure 3 and page 3 [0041]).

***Allowable Subject Matter***

4. Claims 9 and 18 are allowed.

5. Claim 9 and 18 is allowable due to the further limitations of calculating a subsequent transmission time at which said local clock of said other node was reading when said other node transmitted said subsequent signal based on said calculated difference and comparing said subsequent transmission time to a time representing a beginning of a time slice to determine a propagation time for said subsequent signal to propagate between said other node and said node.

***Response to Arguments***

6. Applicant's arguments see Remarks, filed 5/31/06, with respect to the rejection(s) of claim(s) 1-8 and 10-17 under Mincher et al. (US 5408506) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Chuah et al. (US 202/0131370).

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Purho (US 2004/0093435), Method For Synchronizing A First Clock To A Second Clock, Processing Unit And Synchronization System.

b) Teppler (US 2005/0160272), System And Method For Providing Trusted Time In Content Of Digital Data Files.

c) Belcea (US 7072432), System and Method For Correcting The Clock Drift and Maintaining The Synchronization Of Low Quality Clocks in Wireless Networks.

d) Holmeide et al. (US 2003/0142696), Method For Ensuring Access To A Transmission Medium.

e) Hodge (US 6438702), Method For Providing A Precise Network Time Service.

f) Khoa To and James Sasitorn, N.A.M.E: The Network Time Protocol for Ad Hoc Mobile Environments, Rice University.



Art Unit: 2663

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571) 272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

N.N.  
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**Nguyen Ngo**

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